

ward Limb the red and yellow. So that now their order from the central Spot was white, yellow, red; black; violet, blue, white, yellow, red, &c. contrary to what it was before.

O B S. III.

When the Rings or some parts of them appeared only black and white, they were very distinct and well defined, and the backness seemed as intense as that of the central Spot. Also in the borders of the Rings, where the Colours began to emerge out of the whiteness, they were pretty distinct, which made them visible to a very great Multitude. I have sometimes numbered above thirty Successions (reckoning every black and white Ring for one Succession) and seen more of them, which by reason of their smallness I could not number. But in other Positions of the Prisms, at which the Rings appeared of many Colours, I could not distinguish above eight or nine of them, and the exterior of those were very confused and dilute.

In these two Observations to see the Rings distinct, and without any other Colour than black and white, I found it necessary to hold my Eye at a good distance from them. For by approaching nearer, although in the same inclination of my Eye to the plane of the Rings, there emerged a blueish Colour out of the white, which by dilating it self more and more into the black rendered the Circles less distinct, and left the white a little tinged with red and yellow. I found also by looking through a slit or oblong hole, which was narrower than the Pupil of my Eye, and held close to it

it parallel to the Prisms, I could see the Circles much distincter and visible to a far greater number than otherwise.

O B S. IV.

To observe more nicely by the order of the Colours which arose out of the white Circles as the Rays became less and less inclined to the plate of Air; I took two Object Glasses, the one a Plano-convex for a fourteen-foot Telescope, and the other a large double convex for one of about fifty-foot; and upon this, laying the other with its plane-side downwards, I pressed them slowly together, to make the Colours successively emerge in the middle of the Circles, and then slowly lifted the upper Glass from the lower to make them successively vanish again in the same place. The Colour, which by pressing the Glasses together emerged last in the middle of the other Colours, would upon its first appearance look like a Circle of a Colour almost uniform from the circumference to the center, and by compressing the Glasses still more, grow continually broader until a new Colour emerged in its center, and thereby it became a Ring encompassing that new Colour. And by compressing the Glasses still more, the Diameter of this Ring would encrease, and the breadth of its Orbit or Perimeter decrease until another new Colour emerged in the center of the last: And so on until a third, a fourth, a fifth, and other following new Colours successively emerged there, and became Rings encompassing the innermost Colour, the last of which was the black Spot. And, on the contrary, by lifting